

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 – 37. (Canceled)

38. (Currently amended) A computer readable medium bearing a computer readable representation of an object, wherein said object comprises primitive and non-primitive members, and wherein said object is serialized for retrieval by computer hardware, the computer readable representation comprising:

a binary fragment associated with said object, said binary fragment comprising a binary fragment header and a binary fragment payload, wherein the binary fragment payload ~~comprises all~~ includes a plurality of primitive data members of said object, and wherein the binary fragment payload is devoid of any non-primitive members of said object; and

at least one additional fragment comprising at least one non-primitive member of said object,

wherein said plurality of primitive data members in the binary fragment payload represent all of the primitive data members associated with said object,

wherein said plurality of primitive data members are in a storage engine record format_i[[:]]

wherein the binary fragment header comprises a type field and a length field, and[[:]]
~~wherein said primitive data members comprise only members of a primitive data type, said primitive data type comprising at least integers and excluding at least collections; and~~

wherein the type field indicates that the binary fragment payload is devoid of any non-primitive data members.

~~at least one additional fragment comprising at least one non-primitive member of the object.~~

39. (Canceled)

40. (Currently amended) The computer readable medium of claim 38, wherein said at least one additional fragment comprises:

at least one Large Object (LOB) fragment comprising a LOB fragment header and a LOB fragment payload₁[[;]]

wherein the LOB header comprises a LOB type field, a value type field, and a LOB length field₁[[;]]

wherein the LOB type field indicates the LOB fragment is a LOB fragment₁[[;]]

wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location, and[[;]]

wherein the LOB length field indicates a length of the LOB fragment payload.

41. (Previously presented) The computer readable medium of claim 40, wherein the LOB fragment payload comprises a LOB.

42. (Previously presented) The computer readable medium of claim 40, wherein the LOB fragment payload comprises a pointer to a LOB location.

43. (Previously presented) The computer readable medium of claim 40, wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB, a pointer to a LOB location, or a cell reference.

44. (Previously presented) The computer readable medium of claim 38, further comprising a terminator fragment that marks the end of the object, said terminator fragment comprising a terminator type field indicating the terminator fragment is a terminator fragment.

45. (Currently amended) The computer readable medium of claim 38, wherein said at least one additional fragment comprises:

a collection start fragment comprising a collection start header₁[[;]]

wherein the collection start header comprises a collection start type field and a bit field₁[[;]]

wherein the collection start type field indicates the collection start fragment is a collection start fragment, and[[;]]

wherein the bit field indicates whether an order exists among a plurality of collection element fragments.

46. (Currently amended) The computer readable medium of claim 45, further comprising:

at least one collection element fragment comprising a collection element header and collection element payload₁[[;]]

wherein the collection element header comprises a collection element type field and a collection element length field₁[[;]]

wherein the collection element type field indicates the collection element fragment is a collection element fragment₁ and₁[[;]]

wherein the collection element length field indicates the a length of the collection element payload.

47. (Previously presented) The computer readable medium of claim 46, wherein the collection element payload comprises a data member in a collection of data members corresponding to said collection start fragment.

48. (Previously presented) The computer readable medium of claim 46, wherein the collection element header further comprises a collection element locator field that provides a unique location of a data member in a collection of data members.

49. (Currently amended) A computer readable medium bearing a computer readable representation of an object that is serialized for efficient retrieval by computer hardware, the computer readable representation comprising:

at least one Large Object (LOB) fragment comprising a LOB fragment header and a LOB fragment payload₁[[;]]

wherein the LOB header comprises a LOB type field, a value type field, and a LOB length field₁[[;]]

wherein the LOB type field indicates the LOB fragment is a LOB fragment₁[[;]]

wherein the value type field indicates whether the LOB fragment payload comprises an inline LOB or a pointer to a LOB location, and[[;]]

wherein the LOB length field indicates a length of the LOB fragment payload;

a collection start fragment comprising a collection start header,[[;]]

wherein the collection start header comprises a collection start type field and a bit field,[[;]]

wherein the collection start type field indicates the collection start fragment is a collection start fragment, and[[;]]

wherein the bit field indicates a property of a collection in one of a plurality of collection element fragments,

wherein the bit field further indicates whether an order exists among [[a]] the plurality of collection element fragments; and

the [[a]] plurality of collection element fragments associated with said collection start fragment,

wherein each of ~~said~~ the plurality of collection element fragments ~~comprising~~ comprises a collection element header and a collection element payload, and

wherein each collection element payload comprises ~~only~~ a data member of a collection element data type, said collection element data type comprising data of a same type as every collection element associated with said collection start fragment.

50-53. (Canceled)

54. (Currently amended) The computer readable medium of claim 49,

wherein the collection element header comprises a collection element type field and a collection element length field,[[;]]

wherein the collection element type field indicates the collection element fragment is a collection element fragment, and[[;]]

wherein the collection element length field indicates a length of the collection element payload.

55. (Currently amended) A computer readable medium bearing a computer readable representation of an object that is serialized for efficient retrieval by computer hardware, the computer readable representation comprising:

a collection start fragment comprising a collection start header₁[[;]]

wherein the collection start header comprises a collection start type field and a bit field₁[[;]]

wherein the collection start type field indicates the collection start fragment is a collection start fragment₁[[;]]

wherein the bit field indicates a property of a collection in one of a plurality of collection element fragments, and

wherein the bit field further indicates whether an order exists among [[a]] the plurality of collection element fragments; and

the [[a]] plurality of collection element fragments associated with said collection start fragment, each of said collection element fragments comprising a collection element header and a collection element payload,

wherein each collection element payload comprises only a data member of a collection element data type, said collection element data type comprising data of a same type as every collection element associated with said collection start fragment₁[[;]]

wherein the collection element header comprises a collection element type field and a collection element length field₁[[;]]

wherein the collection element type field indicates the collection element fragment is a collection element fragment₁, and[[;]]

wherein the collection element length field indicates the a length of the collection element payload.

56. (Canceled)

57. (Previously presented) The computer readable medium of claim 55, wherein the collection element header further comprises a collection element locator field that provides a unique location of a data member in a collection of data members.

58. (Currently amended) A computer readable medium bearing a computer readable representation of an object that is serialized for efficient retrieval by computer hardware, the computer readable representation comprising:

a binary fragment associated with said object, said binary fragment comprising a binary fragment header and a binary fragment payload, wherein the binary fragment payload ~~comprises all~~ includes a plurality of primitive data members of said object and is devoid of any non-primitive members of said object, and

wherein said plurality of primitive data members in the binary fragment payload represent all of the primitive data members associated with said object,

wherein said plurality of primitive data members are in a storage engine record format,[[:]]

wherein the binary fragment header comprises a type field and a length field, and[[:]]

~~wherein said primitive data members comprise only members of a primitive data type, said primitive data type comprising at least integers and excluding at least collections; and~~

wherein the type field indicates that the binary fragment is the only fragment of the object and that the binary fragment payload is devoid of any non-primitive data members.